

Amendments to The Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently amended): A client-server based file transfer method for a client computer system comprising the steps of:

creating at a client computer system, a local file for holding a downloaded local copy of a remote file of a remote file system of a remote server;

receiving at the local computer system, an application program-initiated request for accessing a desired portion of the local file, wherein the application program-initiated request comprises a read position indicator, the read position indicator identifying a location in the local file of the desired portion of the local file;

when the desired portion of the local file has not been downloaded from the remote file to the local file, requesting a file transfer of the remote file from the remote server, the request indicating the location in the remote file of the desired portion;

then starting a file transfer of the remote file from the remote server to the local file wherein the file transfer starts at the location of the remote file identified by the read position indicator;

~~keeping at the client computer system, at least a portion of a file system associated file ready for being accessed by an application program while the contents of said file is being transferred between said server and said client, and~~

when the desired portion has been transferred from the remote file to the local file fulfilling application program-initiated requests for accessing ~~specified portions~~ the desired portion of said local file while other portions of said local file have not yet been ~~is being~~ transferred from the remote file to the local file.

2. (Currently amended): The method according to claim 1 ~~further~~ comprising, the further step of communicating with said remote file system by a Future File System Extension program, via a protocol directed to file accesses to said remote file system.

3. (Currently amended): The method according to claim 2 in which said protocol is any one of XD SM, or derivable from XD SM, or functionally equivalent to XD SM.

4. (Original): The method according to claim 2 in which said Future File System Extension program is implemented as a stacked file system.

5. (Currently amended): The method according to claim 2 in which said Future File System Extension program is implemented in the a file system of the client computer system itself.

6. (Currently amended): The method according to claim 1 ~~further~~ comprising, the further step of rendering data the desired portion on the client computer system.

7. (Canceled)

8. (Canceled)

9. (Currently amended): A client-server based file transfer method comprising the steps of:

issuing specifications by said client-server, the specifications indicating one or more portions of a client-requested remote file; and

streaming the client-requested remote file information to a client computer system in the one or more portions according to the specifications issued by said client-server;

saving the one or more portions in a local file of the client computer system; and

permitting a client application to access the local file to operate on a saved portion of the one or more portions when the local file has not received all portions of the client-requested remote file.

10. (Currently amended): The method according claim 9 in which said step of streaming is performed by sequentially streaming the requested file, and skipping portions of the file previously streamed.

11. (Currently amended): A client-server based file transfer apparatus for a client computer system, the apparatus comprising:

a network;

a first computer system in communication with the network;

a second computer system in communication with the first computer system by way of the network wherein the computer systems includes instructions to execute a method comprising:

creating at a client computer system, a local file for holding a downloaded local copy of a remote file holding a downloaded local copy of a remote file of a remote file system of a remote server;

receiving at the local computer system, an application program-initiated request for accessing a desired portion of the local file, wherein the application program-initiated request comprises a read position indicator, the read position indicator identifying a location in the local file of the desired portion of the local file;

when the desired portion of the local file has not been downloaded from the remote file to the local file, requesting a file transfer of the remote file from the remote server, the request indicating the location in the remote file of the desired portion;

then starting a file transfer of the remote file from the remote server to the local file wherein the file transfer starts at the location of the remote file identified by the read position indicator;

~~means for keeping at the client computer system, at least a portion of a file system associated file ready for being accessed by an application program while the contents of said file is being transferred between said server and said client, and~~

when the desired portion has been transferred from the remote file to the local file means for fulfilling application program-initiated requests for accessing ~~specified portions~~ the desired portion of said local file while other portions of said local file have not yet been ~~is being~~ transferred from the remote file to the local file.

12. (Currently amended): The apparatus according to claim 11 ~~further comprising,~~ the further step of

~~means for~~ communicating with said file system by a Future File System Extension program, via a protocol directed to file accesses to said file system.

13. (Currently amended): The apparatus according to claim 12 in which said protocol is any one of XDSM, ~~or~~ derivable from XDSM, or functionally equivalent to XDSM.

14. (Original): The apparatus according to claim 12 in which said Future File System Extension program is implemented as a stacked file system.

15. (Currently amended): The apparatus according to claim 12 in which said Future File System Extension program is implemented in ~~the~~ a file system of the client computer system itself.

16. (Currently amended): The apparatus according to claim 11 ~~further comprising,~~ the further step of ~~means for~~ rendering data the desired portion on the client computer system.

17. Canceled

18. Canceled

19. (Currently amended): A client-server based file transfer apparatus comprising:

~~means for~~ issuing specifications by said client-server, the specifications indicating one or more portions of a client-requested remote file; and

~~means for~~ streaming the client-requested remote file information to a client computer system in the one or more portions according to the specifications issued by said client-server;

saving the one or more portions in a local file of the client computer system; and

permitting a client application to access the local file to operate on a saved portion of the one or more portions when the local file has not received all portions of the client-requested remote file.

20. (Currently amended): The apparatus according claim 19 in which said ~~means for~~ streaming includes ~~means for~~ sequentially streaming the requested file, and skipping portions of the requested file previously streamed.

21. (Currently amended): A computer program product ~~comprising a computer useable medium having computer readable program code means therein~~ for use with a client-server based file transfer apparatus for a client computer system ~~comprising~~, the computer program product comprising:

a storage medium readable by a processing circuit and storing instructions for execution by a processing circuit for performing a method comprising the steps of:

creating at a client computer system, a local file for holding a downloaded local copy of a remote file of a remote file system of a remote server;

receiving at the local computer system, an application program-initiated request for accessing a desired portion of the local file, wherein the application program-initiated request comprises a read position indicator, the read position indicator identifying a location in the local file of the desired portion of the local file;

when the desired portion of the local file has not been downloaded from the remote file to the local file, requesting a file transfer of the remote file from the remote server, the request indicating the location in the remote file of the desired portion;

then starting a file transfer of the remote file from the remote server to the local file wherein the file transfer starts at the location of the remote file identified by the read position indicator;

~~computer readable code means keeping at the client computer system, at least a portion of a file system associated file ready for being accessed by an application program while the contents of said file is being transferred between said server and said client, and~~

when the desired portion has been transferred from the remote file to the local file ~~computer readable code means for~~ fulfilling application program-initiated requests for accessing ~~specified portions~~ the desired portion of said local file while other portions of said local file have not yet been ~~is being~~ transferred from the remote file to the local file.

22. (Currently amended): The computer program product according to claim 21 ~~further comprising,~~ the further step of

~~computer readable program code means for~~ communicating with said file system by a Future File System Extension program, via a protocol directed to file accesses to said file system.

23. (Currently amended): The computer program product according to claim 22 in which said protocol is any one of XDSM, or derivable from XDSM, or functionally equivalent to XDSM.

24. (Original): The computer program product according to claim 22 in which said Future File System Extension program is implemented as a stacked file system.

25. (Currently amended): The computer program product according to claim 22 in which said Future File System Extension program is implemented in ~~the~~ a file system of the client computer system itself.

26. (Currently amended): The computer program product according to claim 21 ~~further comprising,~~ the further step of ~~computer readable program code means for~~ rendering ~~data~~ the desired portion on the client computer system.

27. Canceled

28. Canceled

29. (Currently amended): A computer program product ~~comprising a computer useable medium having computer readable program code means therein~~ for use with a client-server based file transfer apparatus for a client computer system comprising: , the computer program product comprising:

a storage medium readable by a processing circuit and storing instructions for execution by a processing circuit for performing a method comprising the steps of:

~~computer readable program code means for~~ issuing specifications by said client-server, the specifications indicating one or more portions of a client-requested remote file; and

~~computer readable program code means for~~ streaming the client-requested remote file information to a client computer system in the one or more portions according to the specifications issued by said client-server;

saving the one or more portions in a local file of the client computer system; and

permitting a client application to access the local file to operate on a saved portion of the one or more portions when the local file has not received all portions of the client-requested remote file.

30. (Currently amended): The computer program product according claim 29 in which said ~~computer readable program code means for~~ streaming includes computer readable program code means for sequentially streaming the requested file, and skipping portions of the requested file previously streamed.

